WHAT IS CLAIMED IS:

1. A method of altering the appearance of a three-dimensional object formed by a solid freeform fabrication apparatus, the three-dimensional object formed from a build material comprising at least one polymer component, the method comprising the steps of:

(a) applying a fluid medium to the three-dimensional object at a temperature above the glass transition temperature of the polymer component, the fluid medium carrying an infiltration agent and permeating the three-dimensional object at a temperature above a glass transition temperature of the polymer component;

(b) maintaining the application of the fluid medium to the three-dimensional object to allow the infiltration agent to penetrate the three-dimensional object and establish a desired appearance of the three-dimensional object; and

(c) terminating the application of the fluid medium carrying the infiltration agent to the three-dimensional object.

2. The method of claim 1 wherein the solid freeform fabrication apparatus for forming the three-dimensional object is selected from the group consisting of a stereolithography apparatus, a selective deposition modeling apparatus, a laminated object manufacturing apparatus, a laser sintering apparatus, and combinations thereof.

3. The method of claim 1 wherein the step of applying the fluid medium to the three-dimensional object is achieved by submersing at least a portion of the three-dimensional object in a bath of the fluid medium.

4. The method of claim 1 wherein the fluid medium is selectively applied to only a portion of the three-dimensional object to alter the appearance of the portion of

the three-dimensional object in which the fluid medium is selectively applied.

5. The method of claim 1 wherein the step of applying the fluid medium to the three-dimensional object is achieved by spraying the fluid medium on the three-dimensional object.

6. The method of claim 1 wherein the infiltration agent is a colorant.

7. The method of claim 1 wherein the infiltration agent is a colorant selected from the group of primary component colors consisting of cyan, magenta, yellow, black, and combinations thereof.

8. The method of claim 1 wherein the infiltration agent is phosphorescent.

9. The method of claim 1 wherein the infiltration agent is conductive.

10. The method of claim 1 wherein the polymer component is selected from the group consisting of a thermoplastic material, a thermosetting material, and combinations thereof.

11. The method of claim 1 wherein the polymer component comprises epoxies, acrylates, vinyl ethers, unsaturated polyesters, bismaleimides, and combinations thereof.

12. The method of claim 1 wherein the polymer component comprises nylon,

carbon-hydrogen waxes, acrylics, Acrylonitrile Butadiene Styrene, polyimide resins, polycarbonates, polyurethanes, and combinations thereof.

13. The method of claim 1 wherein the fluid medium comprises alcohol, ketones, esters, pyrrolidinone, and combinations thereof.

14. The method of claim 1 wherein the fluid medium comprises fatty acid esters derived from organic oil-based fluids.

15. The method of claim 14 wherein the organic oil-based fluids are selected from the group consisting of linseed oil, soybean oil, castor oil, sunflower seed oil, tall oil, tung oil, corn oil, rapeseed oil, and combinations thereof.

16. A fluid composition for processing three-dimensional objects formed from a build material by a solid freeform fabrication apparatus in order to alter the appearance of the object, the build material comprising at least one polymer component, the fluid composition comprising:

an oil-based component that permeates the three-dimensional object when in contact with the three-dimensional object at a temperature above a glass transition temperature of the polymer component; and

an infiltration agent dispersed in the oil-based component that penetrates the three-dimensional object during processing and alters the appearance of the three-dimensional object.

17. The fluid composition of claim 16 further comprising:

a surfactant additive for enhancing the penetration of the infiltration agent in the three-dimensional object during processing.

18. The fluid composition of claim 16 wherein the oil-based component comprises fatty acid esters derived from organic oil-based fluids.

19. The fluid composition of claim 18 wherein the organic oil-based fluids are selected from the group consisting of linseed oil, soybean oil, castor oil, sunflower seed oil, tall oil, tung oil, corn oil, rapeseed oil, and combinations thereof.

20. The fluid composition of claim 16 wherein the infiltration agent is a dye colorant.

21. The fluid composition of claim 20 wherein the dye colorant is selected from the group of primary component colors consisting of cyan, magenta, yellow, black, and combinations thereof.

22. The fluid composition of claim 16 wherein the infiltration agent is a phosphorescent dye.

23. The fluid composition of claim 16 wherein the infiltration agent is a conductive dye.